

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 289 174 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
10.11.2004 Bulletin 2004/46

(51) Int Cl.7: **H04B 10/135**

(43) Date of publication A2:
05.03.2003 Bulletin 2003/10

(21) Application number: **02255917.3**

(22) Date of filing: **27.08.2002**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
IE IT LI LU MC NL PT SE SK TR**
Designated Extension States:
AL LT LV MK RO SI

- Bordogna, Giuseppe G
Ottawa, Ontario K2P 0K4 (CA)
- Jamal, Riyaz R.
Nepean, Ontario K2J 4W7 (CA)
- McGhan, Douglas D.
Ottawa, Ontario K1Y 4A8 (CA)
- O'Sullivan, Maurice S.
Ottawa, Ontario K1Y 0S5 (CA)

(30) Priority: 27.08.2001 US 314663 P
15.10.2001 US 975985

(71) Applicant: **Nortel Networks Limited**
St. Laurent, Quebec H4S 2A9 (CA)

(74) Representative: **Anderson, Angela**
Nortel Networks Limited,
Harlow Laboratories,
London Road
Harlow, Essex CM17 9NA (GB)

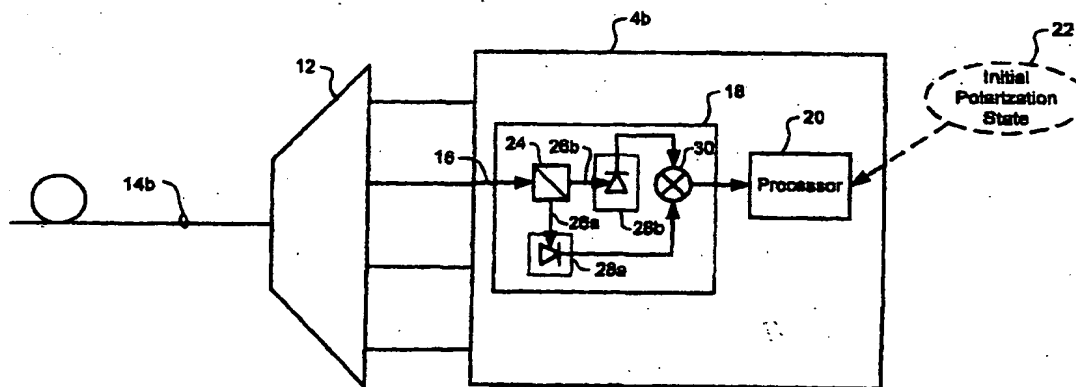
(72) Inventors:
• **Roberts, Kim B**
Nepean, Ontario K2R 1C8 (CA)

(54) Measurement of polarization dependent loss in an optical transmission system

(57) A method and system enables measurement of polarization dependent loss (PDL) in an optical communications system including a plurality of cascaded optical components. An optical signal having a predetermined initial polarization state is launched into the opti-

cal communications system. A polarization state of the signal is detected at a selected detection point downstream of the launch point. The PDE is evaluated using the predetermined initial polarization state and the detected polarization state.

Figure 2



EP 1 289 174 A3

[illegible]

THIS PAGE BLANK (USPTO)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 02 25 5917

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 553 460 A (HEWLETT PACKARD CO) 4 August 1993 (1993-08-04)	1-7,11, 12,19, 20,22, 24-29,32	H04B10/135
Y	* page 3, line 56 - page 4, line 17 * * page 4, line 40 - line 46 * * page 5, line 51 - page 6, line 9 * * page 6, line 29 - line 46 * * page 11, line 34 - line 44 *	8,9,17, 21,30,37	
Y	EP 0 615 356 A (AT & T CORP) 14 September 1994 (1994-09-14) * page 2, column 1, line 41 - line 53 * * page 2, column 2, line 31 - line 51 * * page 3, column 3, line 21 - line 43 * * page 4, column 6, line 27 - line 38 * * figure 4 *	8,9,17, 21,30,37	
D,A	US 6 222 652 B1 (GIBBON MARK ACTON ET AL) 24 April 2001 (2001-04-24) * column 3, line 10 - line 18 * * column 8, line 5 - line 15 * * column 9, line 3 - line 12 *	10,13, 23,31,33	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	EP 0 964 537 A (KDD CORP) 15 December 1999 (1999-12-15) * figures 5-7 *	1-38	H04B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 23 September 2004	Examiner Carrasco Comes, N
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 (03.92) (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 25 5917

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

23-09-2004

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0553460	A	04-08-1993	US 5227623 A	13-07-1993
			DE 69215071 D1	12-12-1996
			DE 69215071 T2	30-04-1997
			EP 0553460 A2	04-08-1993
			JP 3213104 B2	02-10-2001
			JP 5273082 A	22-10-1993
EP 0615356	A	14-09-1994	CA 2112175 A1	09-09-1994
			EP 0615356 A1	14-09-1994
			JP 6317770 A	15-11-1994
US 6222652	B1	24-04-2001	GB 2328572 A	24-02-1999
EP 0964537	A	15-12-1999	JP 2000068940 A	03-03-2000
			EP 0964537 A2	15-12-1999
			US 6459518 B1	01-10-2002

13501

HARROW IP LAW GROUP

16 NOV 2004

Recd ☒

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82